

IN THE SPECIFICATION:

Please replace the paragraph found at p. 1, line 9 with the following amended paragraph:

This application is a divisional of application number 09/618,167, filed on July 17, 2000, now U.S. Patent No. 6,661,622.

Please replace the paragraph found at p. 4, line 32 to p. 5, line 13 with the following amended paragraph:

A method of making spin valves having surfaces treated with oxygen is described in a third embodiment of the present invention. An ion beam sputtering technique may be used to make the spin valves. A substrate is provided in a vacuum chamber. A first ferromagnetic layer, which may be a free layer for a top spin valve or a pinned layer for a bottom spin valve, is deposited onto the substrate. A first surface of the first ferromagnetic layer is exposed to an oxygen-rich atmosphere with oxygen partial pressure of between about 1×10^{-7} Torr and about 5×10^{-5} Torr, by introducing an oxygen burst into the vacuum chamber for about 30 seconds. The oxygen molecules are directed toward the substrate, and a substrate shutter is fully open to directly expose the oxygen beam. Oxygen is physisorbed on the first surface. After about 30 seconds, the oxygen is shut off, and the normal process of fabrication of the spin valve is resumed. A spacer layer of about 20Å thick is deposited on the oxygen treated surface. A second oxygen burst is introduced into the vacuum chamber with an oxygen partial pressure of about 5×10^{-6} Torr for treating a second surface of the spacer layer. The process of treating this second surface is similar to the process of treating the first surface as described above. The oxygen is again shut off before a second ferromagnetic layer, which may be a pinned layer for a top spin valve or a free layer bottom spin valve, is subsequently deposited. [[.]]

Please replace the abstract with the following new abstract:

A method for making a spin valve includes providing a substrate; depositing a first ferromagnetic layer having a first surface on the substrate; depositing a spacer layer having a second surface; depositing a second ferromagnetic layer, wherein the spacer layer is disposed between

the first and second ferromagnetic layers; and exposing one or more of the first and second surfaces to an oxygen partial pressure, then decreasing the oxygen partial pressure before depositing a subsequent layer. One or more of the first and second surfaces may be exposed to an oxygen partial pressure of between about 1×10^{-7} Torr and about 5×10^{-5} Torr.